

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 May 2005 (19.05.2005)

PCT

(10) International Publication Number
WO 2005/044999 A3

- (51) International Patent Classification⁷: A01N 63/00, C12N 5/00, 5/06
- (21) International Application Number:
PCT/US2004/037201
- (22) International Filing Date:
5 November 2004 (05.11.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/517,624 5 November 2003 (05.11.2003) US
- (71) Applicant (*for all designated States except US*): NEW ENGLAND MEDICAL CENTER HOSPITALS, INC. [US/US]; NEMCH Box 817, 750 Washington Street, Boston, MA 02111 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): FOSS, Francine, M. [US/US]; 44 Whittier Road, Wellesley, MA 02481 (US). XIE, Yong [US/US]; 27 Grant Avenue, Belmont, MA 02478 (US).
- (74) Agents: MEIKLEJOHN, Anita, L. et al.; Fish & Richardson P.C., 225 Franklin Street, Boston, MA 02110-2804 (US).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report:
15 September 2005
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: TREATMENT WITH IMMUNOREGULATORY T CELLS

(57) Abstract: Methods and compositions are provided for the treatment of an autoimmune disease. The methods include administering immunoregulatory T cells (T_{reg}) to patients. The therapeutic T_{reg} can express the CD25, CD4, and/or ICOS antigens. The therapeutic T cells can be CD25⁺ ICOS⁺, CD4⁺ ICOS⁺, and/or CD25⁺ CD4⁺ ICOS⁺, and they can be provided by a donor.

WO 2005/044999 A3